Chapter 2
Europe’s Energy Security
and the Southern Energy Corridor

2.1 What Is Energy Security?

In this study, we do not see ‘energy security’ as an absolute, static term. Rather
what is considered secure is a variable, a continuum, since a pipeline, route, field or
supply is always subject to risk. The risk involved is intricately involved with
conditions of peace or conflict prevailing at a particular point in time, taking
account of diplomacy or geopolitics. At one point in time, there may be cordial,
friendly relations among countries hosting a pipeline on land or undersea, or there
may be partners in exploiting and monetizing an energy supply. At a later period,
these peaceful relations may become adversarial. Peace may break down into
conflict, or vice versa.

Accordingly, in this study, we shall classify hydrocarbon sources of supply by
current levels of risk, as we see them. Thus, as our concern is with European
‘energy security’, we shall define, or approach, different supply routes according to
what we believe is more or less secure at the time of writing.

The EU is expected to support a regional cooperation scheme aimed at devel-
op ing an Eastern Mediterranean gas hub for both energy policy and foreign policy
considerations. Regarding energy policy, the EU must initiate the creation of a
long-lasting gas supply diversification strategy. However, regarding foreign policy
the EU needs to initiate international collaboration in an area of the neighbourhood
that currently presents very low profile of cooperation due to political problems
among neighbouring countries. This will be explained in more detail in Chap. 3
under Sect. 3.4.
2.2 What Is Energy Corridor?

Energy Corridor is a route, typically a pipeline on land or undersea for large-scale transport of hydrocarbons, connecting a producing source to a market destination. It is manmade and requires huge upfront investment for infrastructure and other facilities, such as transmission stations, storage and warehouses, refineries and export/import terminals and related infrastructure. Examples of special interest here are Northern Energy Corridor delivering Russian energy supplies to European markets via Ukraine. By contrast, in this monograph we focus on the Southern Energy Corridor through Turkey. It has three major wings: First, the Baku–Tbilisi–Ceyhan Pipeline transporting Caspian Basin oil to the export terminal at the Port of Ceyhan in southern Turkey near the Syrian border.

Second, there is the Russian–Turkish energy link across the Black Sea. Already, there is the Blue Stream linked to the port of Samsun, now in operation, but new ones are being planned to become operational in the near future.

Third, the Trans Anatolian Pipeline (TANAP) runs from Azerbaijan to the Greek–Turkish border in Thrace to link up with the Trans Adriatic Pipeline (TAP) to carry Caspian and Central Asian hydrocarbons to Western markets. There are, as well, other subsidiary pipelines, for example, Kirkuk–Ceyhan carrying oil from northern Iraq, and the Arab Gas Pipeline projected to connect Ceyhan to a network of countries including Syria, Lebanon, Jordan, Israel and Egypt. New and strategic pipelines in Eastern Mediterranean are also in various stages of planning.

Energy corridors are subjects of great geopolitical discourse. For example, the freeze-up in European countries in January 2009 when Gazprom stopped deliveries in the wake of a price dispute with Ukraine, and then again when war broke out between Ukraine and Russia earlier in 2014 has created a new sense of urgency for reducing European dependency on the Northern energy corridor. As a result, several European countries joined in the huge NABUCCO project to develop a Southern supply route. However, euro debt crisis and geopolitical considerations, along with cost, have now replaced this project with a more feasible one, TANAP, to be financed by Azeri and Turkish investors along with Greek and Italian partners for the TAP segment. Russia favours the TANAP-TAP route, wishing to link up with Turkish Stream across the Black Sea, completely avoiding Ukraine. This wider rationale, with Russian involvement along with Azeri and Turkish component (and likely Israeli participation), reinforces the Regional Energy Model endorsed in this study.

The Southern Energy Corridor has received a big boost from yet another source. The discovery of new sources of natural gas in the Levant Basin has given rise to renewed hopes and expectations of a new bonanza. Cypriot explorations to date have been rather disappointing, but, on the other hand, discovery of important gas fields in Israeli, Lebanese and Egyptian territorial waters has strengthened the prospect of regional cooperation. Israel holds the key, at least initially, as it must
find export markets to monetize its hydrocarbon wealth. Turkey, on the other hand, as the nearest big market, with an existing export terminal at Ceyhan and its TANAP/TAP pipeline to Europe, offers the most cost-effective route to monetize Levant Basin hydrocarbon reserves. However, rather than one giant multinational energy consortium, a gradual, step-by-step evolution of the Regional Energy Model seems the most likely scenario. Thus, in the first stage, Israel would transport natural gas from Leviathan and Tamar to its own port, then, when geopolitics permits, it would transfer exportable gas to Egypt. With its own huge discovery at Zohr gas field, Egypt may eventually have capacity for LNG conversion, and exportable surplus to Europe and world markets. At the same time, and again depending on favourable geopolitics, Israel would likely enter into an undersea pipeline project with Turkey to transport its gas to Ceyhan, going via Lebanese and Cypriot territorial waters, raising the attractive incentive to these countries of win-win prospects. Depending on whether there is a Cyprus settlement, Greek and Turkish Cypriot regimes may join in, together or separately, in the Israeli–Turkish project. In all these projects, the Israeli determination to monetize offshore hydrocarbon reserves may be expected to trump problems relating to the exact delimitation of boundaries over territorial waters, now under dispute.

2.3 Law of the Sea and EEZ

Articles 55, 56 and 57 of the UN Convention on Law of the Sea (UNCLOS 1982) define, regulate and empower coastline states to declare and ‘exclusive economic zone’ (EEZ) for up to 200 nautical miles in their territorial waters, so long as there is no overlapping boundary issue. Turkey is not a signatory to this Convention [over its dispute with Greece in the Aegean] and is therefore not obliged to honour its application affecting Turkish national interest. Israel, too, is not a signatory to UNCLOS, and neither is the USA. In practice, this would mean that neighbouring countries having overlapping territorial waters should resolve these EEZ disputes through diplomacy and cooperation. Put differently, EEZ boundaries affecting Turkey cannot be determined unilaterally.

Most significantly, article 79 of UNCLOS specifies principles relating to submarine cables and pipelines on the continental shelf (Box 2.1). Subject to the provisions of this article, all states are entitled to lay submarine cables and pipelines.

**Box 2.1 Article 79 of UNCOLS**

1. *All States are entitled to lay submarine cables and pipelines on the continental shelf, in accordance with the provisions of this article.*
2. *Subject to its right to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources and the*
prevention, reduction and control of pollution from pipelines, the coastal State may not impede the laying or maintenance of such cables or pipelines.

3. The delineation of the course for the laying of such pipelines on the continental shelf is subject to the consent of the coastal State.

4. Nothing in this Part affects the right of the coastal State to establish conditions for cables or pipelines entering its territory or territorial sea, or its jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction.

5. When laying submarine cables or pipelines, States shall have due regard to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced.

Source UNCLOS (1982)

These states have the right to lay such submarine facilities and coastal states ‘may not impede the laying or maintenance of such cables and pipelines’. However, the consent of coastline states is required in delineating the course. This consent must rest on (1) ‘reasonable measures for the exploration of the continental shelf’ and (2) ‘the prevention, reduction and control of pollution from pipelines’. In short, coastal states do not have an outright veto right to prevent other states wishing to lay undersea pipelines. If a pipeline proposed by other states does not conflict with existing exploration rights of coastline state in the area of the pipelines concerned and safeguards the environment, then consent cannot be reasonably withheld. Once a pipeline is laid, Art 79 (5) kicks in, protecting built pipelines. Accordingly, if for example, the course of the pipeline goes through an area with no hydrocarbons or other submarine wealth at the time when a pipeline is laid, and at the same time the pipeline meets environmental standards, consent should be forthcoming as a matter of reasonable behaviour. Consent cannot be denied as of right under UNCLOS.

Regardless of legality, the case of South Cyprus, Greece and Turkey presents exceptional difficulties in so far as territorial waters are concerned. Greece has refrained from unilateral application of its legal right under the UN Convention in Aegean to extend its territorial waters around Greek islands to 12 miles [from the status quo of 3 miles], no doubt in deference to Turkish declaration that such unilateral action would be ‘casus belli’, i.e. declaration of war on Turkey, the strong implication being a military showdown.

The Cypriot case is even more complex because Turkey does not recognize Greek Cypriot regime as the legitimate ‘Republic of Cyprus’ declared in the 1960 Constitution for which, along with Greece and the United Kingdom, Turkey acts as a ‘Guarantor Power’. The 1960 Constitution, giving Cyprus independence from the United Kingdom provided a partnership Republic which, in 1963–1964, was
violently destroyed and replaced by an all-GC regime. The problem was further complicated in 1974 when GC regime at that time in power, staged a coup d’état for ENOSIS (union of the island with Greece) which Turkey prevented by military intervention. As a result, the island has been divided on ethnic lines into all-GC South Cyprus and all-Turkish North Cyprus. The former enjoys international recognition and since 2004 has been an EU member. Turkish Cypriots, for all practical purposes, are isolated politically and diplomatically, their 1960 Constitutional rights remaining in limbo. The UN Secretary General has led a ‘good offices’ mission since 1964, working to date fruitlessly to resolve the impasse. The latest round of UN-led negotiations in Crans-Montana Switzerland in July 2017 concluded in failure.

GC regime in South Cyprus, in concert with Greece, has taken unilateral action, without the consent of Turkish Cypriots, to declare its own EEZ, ignoring Turkey’s overlapping claims. It has also adopted a blind eye to Turkish Cypriot rights as co-owners of the island, claiming exclusive sovereign rights, including licensing, exploration and monetization of hydrocarbons, often undermining ongoing UN-sponsored negotiations. With the discovery of natural gas reserves in the island’s territorial waters, these overlapping claims have become even more intense and provocative.

Turkish Cypriots, backed by Turkey, claim co-ownership and an equal say in exploration and monetization of these hydrocarbons, insisting that these offshore gas fields must be exploited and monetized only after settlement of the Cyprus Problem when cooperation and win-win outcome becomes feasible.

The Greek/GC and Turkish/TC cases of disputed territorial waters are not the only ones in Eastern Mediterranean. There are disputes between Lebanon and Israel and in the case of the Arab Gas Project, topics to be discussed in later parts of the monograph. In addition, the East Mediterranean region is bedevilled by civil war, conflict and terrorism. Egypt, which recently discovered huge offshore reserves in the Zohr gas fields, is threatened by Islamic terrorism directed at the military regime as well as the peace deal with Israel. The Jewish state, bogged down with the Palestinian conflict, is surrounded by hostile neighbours. It has a fragile peace with Cairo, and has invested heavily in a network of pipelines over Sinai and undersea with Egypt, but is constantly vulnerable to Islamic terrorism targeting not only the land and population of Israel itself, but also its pipelines to from Leviathan and Tamar gas fields. It needs Turkey, the only Muslim-majority power in the region for normal diplomatic and commercial relations to monetize its Levant hydrocarbons. This has been confirmed in the reconciliation agreement reached between the two countries on 27 June 2016. Lebanon is in much the same situation. Burdened with a complex demographic and domestic political agenda, it lacks capacity to invest in infrastructure and manage its huge offshore hydrocarbon wealth and it has a boundary problem with Israel.

Regional peace and cooperation is clearly the optimal solution for realizing its hydrocarbon wealth potential. Looking to the future, rational choice seems to be most evident in the case of Israel gas fields. In this context, the most pragmatic way forward is through private-sector led development of the Regional Energy Model.
Israel, in particular, can play a vital role in launching such a Model. Utilizing its good relations with Greek Cyprus, for example, Israel can finance an undersea pipeline going through Cyprus EEZ, securing the necessary consent from Nicosia for this, while Turkish partners can undertake responsibility for the northern segment of the pipeline going to Ceyhan.

Private partnership is the key East Mediterranean Energy Model. Oil and gas companies, foreign and local, pursuing commercial self-interest, can provide finance, investment and technical know-how. But, of course, states and political leadership must facilitate with licensing, promotion and protection of a healthy business environment. Existing international law is supportive of an Israel–Turkey undersea gas pipeline. In addition to UNCLOS reviewed above, there is legal support from the Energy Charter Treaty. Under this Treaty, to which both Cyprus and Turkey are signatory powers, EEZs are not considered ‘sovereign territory’, meaning that Greek Cypriot claims of territorial waters cannot stop an Israel–Turkey undersea pipeline from proceeding as a bilateral project. Of course, the better alternative would be a political settlement in Cyprus and peaceful relations between Cyprus and Turkey. Cyprus has already good relations with Israel, and, as pointed above, there are ways of overcoming Greek Cyprus concerns, even in the event of non-settlement of the Cyprus Problem. Better still would be settlement. Given peace and cooperation, great prosperity can be achieved through partnership for a win-win outcome. For this to happen, perhaps the optimal path is a private-sector development of hydrocarbon wealth and pipeline construction in otherwise troubled waters. Some combination of private and public interest for common good is also a reflection of reasonable behaviour. This is what happened elsewhere, when wiser and cooler heads win the day. A model case if the North Sea Oil, briefly discussed below.

2.4 What Is Reasonable? The Case of North Sea Oil

The North Sea hydrocarbon wealth is an impressive model of international cooperation for a ‘win-win’ outcome. It can be used as a reference in determining ‘reasonable’ decision-making under Art. 79 (2). No less than five countries (UK, Norway, Denmark, Germany and the Netherlands) have behaved with rationality and common-sense to divide the North Sea and share its hydrocarbon wealth, peacefully and cooperatively. Even though the North Sea in question contains numerous small islands, each potentially with its own EEZ, the five countries have gone ahead basing their share of division of 290,000 miles$^2$ ($750,000$ kms$^2$) cooperatively, according to agreed median lines, taking cue from a 1958 Continental shelf convention and an enabling court ruling in 1969. Division among the five countries was achieved first, major discovery and monetization followed later.

Oil and gas in the North Sea is produced by five countries. Within each of the five national jurisdictions, national tax and royalty licensing regime prevails.
Peaking in 1999, production of North Sea oil was almost 950,000 m³ (six million barrels) per day. Natural gas production was nearly 10 trillion cubic feet. As a result of Brexit, Scotland may eventually opt for independence, in part to better control its share of the remaining North Sea energy resource. However, in view of diminishing gas reserves, other considerations will, no doubt, play greater role in such an eventuality.

2.5 What Is an Energy Hub? Can Ceyhan Be a Hub?

There are several competing interests and potential candidates in Eastern Mediterranean to emerge as an energy hub: Syrian port of Latakia (once the Syrian war is over), Limassol in South Cyprus, Tripoli, Lebanon or other locations in the Levant. Economics of scale and efficiency considerations suggest that only one candidate is likely to become an energy hub. In this study we believe the Turkish export terminal at Ceyhan is already on the way to beat the competition. It is acquiring significant comparative advantages over other candidates, but undoubtedly major challenges exist in this case, as well as in others.

An energy hub is a strategically located centre, typically a port, offering a set of energy infrastructure and related services. The Port of Rotterdam is perhaps the best example of an energy hub at its most integrated stage (Source www.portrotterdam.com).

It offers integrated array of energy infrastructure, covering arrival, storage, production and distribution of traditional fossil fuels, LNG plants and modern renewable forms of energy. As well, it provides related services ranging from financial and marketing that permit the setting of spot prices to cutting edge research and innovation centres working to reduce fossil fuel dependency and its replacement with renewable and sustainable energy from as solar, wind and water.

As documented in this study, Turkey is rapidly emerging as a pivotal country in the Southern Energy Corridor, connecting final delivery markets in Europe to supply sources in the Caspian basin as well as the other hydrocarbon fields in Iraq, Kurdish Regional Government, Iran and Levant basin of Israel, Egypt, Lebanon and Cyprus. The Port of Ceyhan (Fig. 2.1) is strategically located in the Bay of Iskenderun to become an energy hub serving the Levant region in Eastern Mediterranean. It is already the terminal of the Baku–Tbilisi–Ceyhan and the Kirkuk–Ceyhan pipelines. It began operations in 2006 and by 2014 2390 tankers loaded 1.84 bn barrels of oil have been shipped (Source http://www.seanews.com).

Several new pipeline projects are in various stages of planning, augmenting the role of Ceyhan, notably an Israeli–Turkish water and gas pipeline passing through Northern Cyprus, the Samsun–Ceyhan pipeline delivering Russian gas via another pipeline across the Black Sea and the Arab Gas Pipeline involving Egypt, Jordan, Syria and Lebanon. Cypriot gas prospects are also on the horizon, depending on geopolitical considerations. With growth and expansion Ceyhan has the potential to become the Rotterdam of the region.
However, the Eastern Mediterranean region is a zone of conflict, shaken by civil wars and terrorism, unstable regimes, and several boundary disputes. Daunting challenges must first be overcome before any potential hydrocarbon wealth can be realized. We shall now explore some of the principal challenges in the region.

The quantities of hydrocarbons in the East Mediterranean Basin are not exactly known. Cost of exploration in troubled waters is not only risky as investment. Disputes over ownership and monetization make development of hydrocarbon fields exceedingly uncertain. Accordingly, how much gas and oil exists is estimated only speculatively. Proven reserves change constantly with new discoveries. Thus, Table 2.1 figures, updated upwards with the addition of new reserves discovered at Zohr gas fields in Egyptian territorial waters, puts total East Mediterranean gas reserves at 8734 bcm. The Zohr gas field is by far the largest, estimated at between 645 and 730 bcm, enough to justify construction of LNG plant, to meet Egyptian domestic needs as well as providing an exportable surplus. Potential Egyptian energy cooperation would include Israel as well as Greek Cypriots and Greece. Greek Cypriot authorities announced their intention to proceed with exploration and drilling in Parcels 10 and 11 of their EEZ during the month of July 2017, a unilateral action rejected by the Turkish side.

Hafner and Tagliapietra (2016) have accentuated that, after the discovery of the Zohr field, Egypt seems to hold the keys of the Eastern Mediterranean gas future. According to the authors, it might opt to develop its resources in parallel to Israel and Cyprus, by creating a new Eastern Mediterranean gas hub based on its existing

**Fig. 2.1** Boat loading at Ceyhan Terminal. Source [http://www.botasint.com/Foto/Original/477__BIL9380.jpg](http://www.botasint.com/Foto/Original/477__BIL9380.jpg) (accessed on 05 August 2017)
exporting infrastructure. Albeit commercially soundly, the realization of such a development will ultimately depend on geopolitical factors. In particular, this will depend on the political willingness of Egypt and Israel to cooperate in such a highly strategic sector.

We believe that the new explorations in Cyprus offshores at Parcel 10 and 11, which are very close to Egyptian Zohr field, may change the whole scenario. New discoveries of a considerable volume of gas in either of these fields may bring new potential and challenges to pipe Leviathan gas with Egyptian Zohr and Cyprus’ Aphrodite gas to Turkey. Eastern Mediterranean gas can then be a new hub with competing prices to the European market, only if political disputes in the region are resolved.

Even with the updated quantities, summarized in Table 2.1, the Levant Basin reserves are not by huge, by global standards, compared to Russian, Iranian/Qatari gas fields or in terms of rising demand in terms of Chinese or India. But in regional terms they are impressive. Just for comparison, total Turkish consumption annually at the present time is about 50 bcm, making the estimated total East Med natural gas reserves to date, enough to meet Turkish requirement for the next 150 years at least.

The vital question which arises is this: Will countries and people of the Levant Basin behave rationally, like the five nations in the case of the North Sea Oil, and divide and share their hydrocarbon wealth cooperatively? Or will they remain forever enemies trapped in war and conflict?

| Table 2.1 Volume of offshore gas in Eastern Mediterranean |
|-----------------|---------|
| **Israel**      |         |
| Leviathan       | 476 bcm |
| Tamar           | 250 bcm |
| Dolphin         | 2 bcm   |
| Dalit           | 14 bcm  |
| Tanin           | 33 bcm  |
| Mari-B          | 30 bcm  |
| Noa             | 1 bcm   |
| **Cyprus**      |         |
| Aphrodite       | 140–220 bcm |
| **Egypt**       |         |
| Zohr            | 645–720 bcm |
| **Gaza**        |         |
| Gaza Marine 1–2 | 28 bcm (yet-to-find) |
| **Lebanon**     |         |
| Phase 1         | 672 bcm (yet-to-find) |
| Total East Med  | Up to 8734 bcm |

East Mediterranean Hydrocarbon Fields: Partners or Enemies forever? (discovered and yet-to-find)

*Source* Hafner and Tagliapietra (2013) … with updating by the authors
In this monograph, we acknowledge conflict and rivalries, yet we deliberately opt for cooperation, if not in the near future, then in the longer term. We believe that, in the final analysis, market forces will prevail and that disputes and conflicts will ultimately yield to cooperation. More specifically we consider the Turkish–Israeli energy cooperation as the catalyst in the development of regional cooperation in hydrocarbons. Most significantly, we believe European consuming countries, acting out of self-interest, can be expected to behave as rational actors guided primarily by market forces.

References


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